Deep Publish 5.0 Tutorial "Measurements, Steps and Views"

Welcome to the world of 3D with Right Hemisphere!

Deep Publish is an authoring tool that enables you to insert 3D models into:

- Adobe FrameMaker documents.
- Microsoft PowerPoint presentations.
- Microsoft Word documents.
- Microsoft Excel spreadsheets.

It also:

- Allows you to convert that 3D content into a PDF document format and email it.
- View 3D content within Right Hemisphere HTML documents, created using Deep Exploration.

Aim

The aim of this tutorial is to learn how to use **Deep Publish** to:

- Add measurements to a 3D model, within a Word document.
- View user-defined steps.
- Display and add model views.

Assumptions

Certain assumptions have been made regarding this introduction:

- You should be familiar with 3D concepts.
- Note that the model displayed on your screen during this tutorial may be different depending on the graphics card you have installed in your computer, the screen geometry, and the colors and placement of objects that you choose.

Features Covered

- Adding measurements to part of the model.
- Viewing user-defined steps.
- Displaying and adding teamwork model views.

Requirements

The following software and files are required for this tutorial:

- Deep Publish version 5.0.
- A 3D model/file with steps and views accessible from your computer.

Completion Time

This tutorial should take approximately 30-40 minutes to complete.

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Adding a Measurement to an Inserted 3D Model

When you have inserted a 3D model into your document, a number of toolbars display; including the 'Drawing and Markup' toolbar.

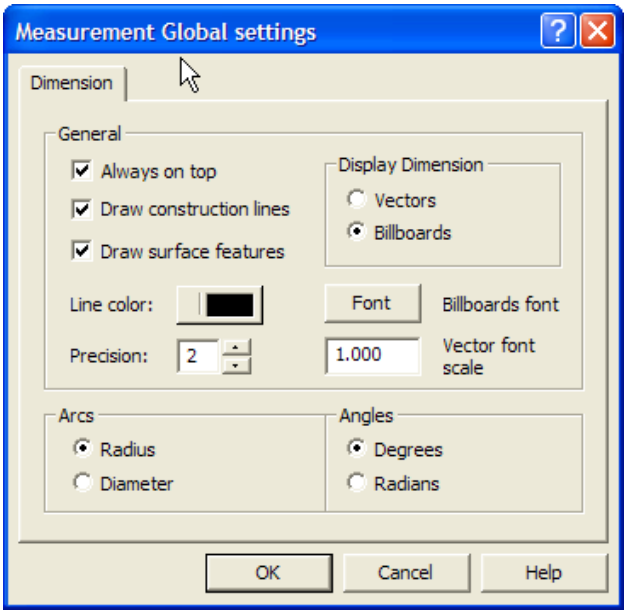


This is the toolbar we will be using to add measurements. The measurement icons are the five right-hand buttons on the toolbar.

Procedure

To add a measurement to a 3D model within a document:

1 From the 'Drawing and Markup' toolbar, click the **Settings** icon . The following screen will be displayed:



The Dimension tab is used to adjust the appearance of measurements including displaying the dimensions, measurement of arcs or circles, and the units in which to display.

2 Select 'Always on top', this will draw the dimension lines on top of all the objects in the scene.

3 Select 'Draw construction lines', this will add red construction lines between the points that are being measured.

4 Select 'Draw surface features', this will add the surface features including vertices and highlighted edges.

5 Change the 'Precision' parameter to the number of decimal places you would like to see displayed, in this example let's select '2'.

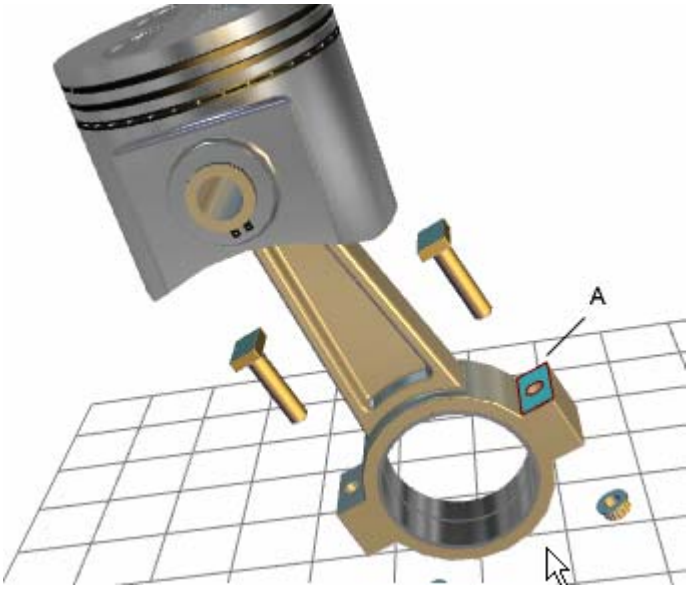
6 Select 'Billboard', so that the dimension rotates to always face the camera.

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7 Click the ‘Distance Measurement’ icon, , and then ensure that only ‘Faces’ is selected.



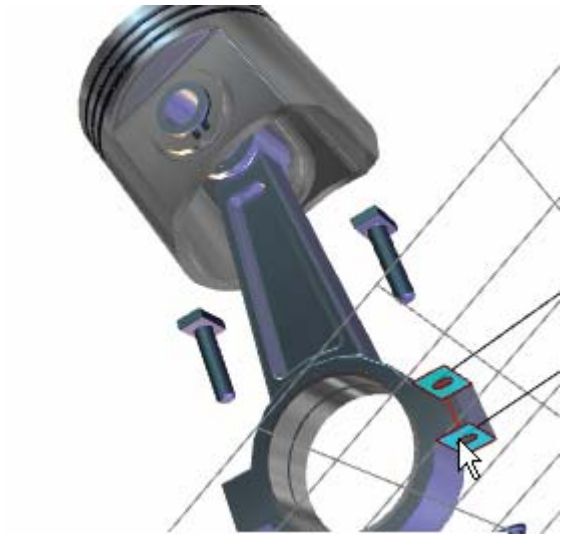
8 Select the first face of the part to which you would like to add a measurement. The face will be highlighted as shown below:



A: Top face selected

9 Select the second face that will form part of the dimension.

Tip: Rotate the model to get a better view of the second face you want to display.

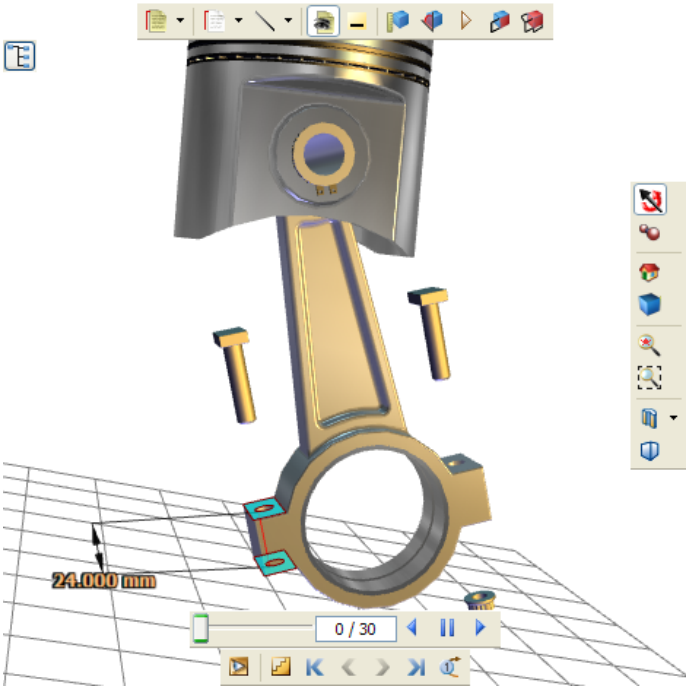


B: Bottom face selected

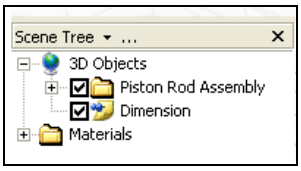
10 Once you have selected the two faces, the dimension will automatically be made, you then decide where you would like the measurement to be positioned within the model, ‘left’ mouse click when the dimension is in the required location.

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11 You should then see your dimension within the 3D model.



12 The ‘dimension’ will also be displayed in the ‘Scene Tree’ window, and can be disabled from the view by unchecking the tick box.



Congratulations, you have successfully added a dimension to your 3D model.

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Viewing a Predefined Step in a 3D Model

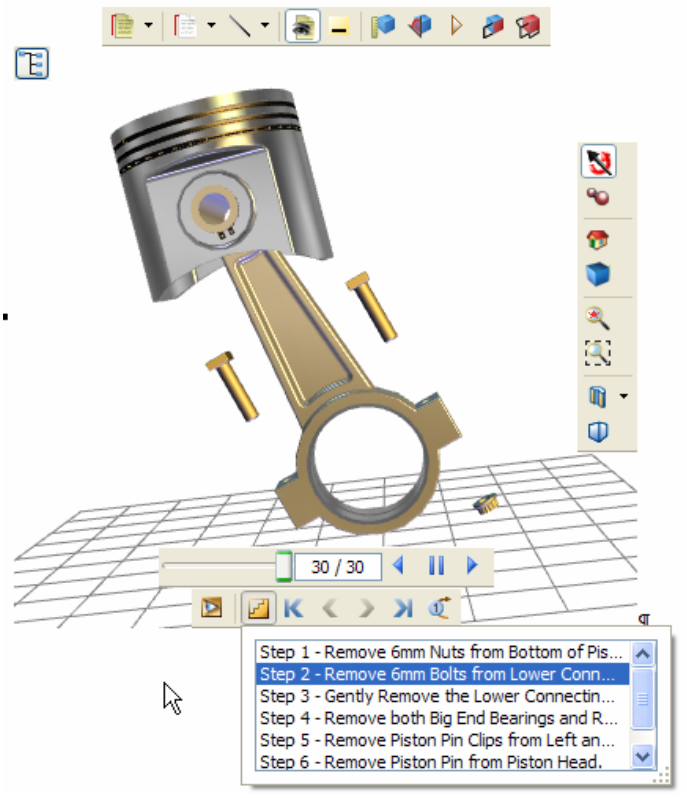
Just as model views emulate the properties of schematic diagrams, so 'steps' can emulate sequences of instructions; they present a list of steps each with a label and explanatory text. Each step comprises a number of user-defined animated sequences that are displayed when you play the step.

When you select a step:

- The active viewport is set to the associated camera and render mode.
- All the objects for the selected step are made visible.
- All objects that are not associated with the step become invisible.

To display a step within a 3D model:

1. From the 'Steps and Model Views' toolbar, click the 'Steps' button, . A drop down list is displayed showing all the user-defined steps.



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13 Click the first ‘step’. The animated sequence that has been defined will be loaded and automatically played.

14 The ‘Steps and Model Views’ toolbar displays the step controls that can be used.



The button functions are:

 Move to the first step.

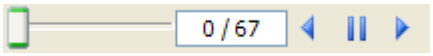
 Move to the previous step.

 Move to the next step.

 Move to the last step.

 Play all the animation sequences.

15 Replay, stop and rewind the active sequence by using the animation toolbar next to the ‘Steps and Model Views’ toolbar.



Tip: You can also select steps by selecting ‘Steps Information’ in the Scene Tree. This method displays the full details of each step, rather than a one-line summary.

Congratulations you have now selected, displayed and played a user defined animated and stepped sequence.

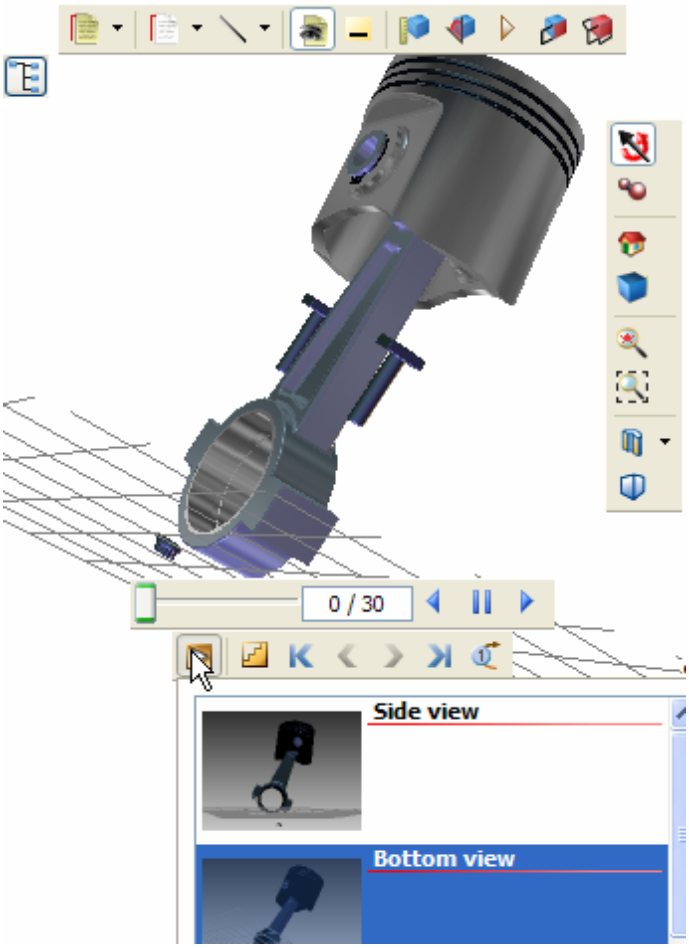
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Displaying Views in a 3D Model

When you display a model view, the view is created immediately with all settings from the current scene (lighting, visibility, etc.) and all the default settings (layer, camera position, active display settings).

To display a model view:

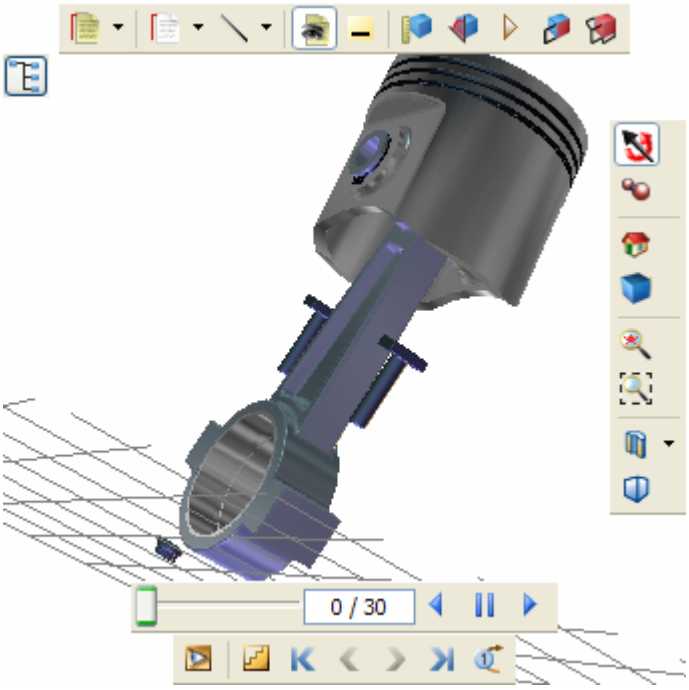
1 From the 'Steps and Model Views' toolbar click the 'Model Views' button, .



2 Click the pre-defined model view that you require.

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3 The view will be displayed in the 3D viewport window.



Note: Model views are created with Deep Exploration and must be saved within the '.rh' format.

When you display a model view:

- The viewport is set to the associated camera render mode.

- All the selected objects are made visible.

- All objects that are not associated with the view become invisible.

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Whenever a markup is added to a scene, model views, based on the current view of the scene, are created or updated. The results depend on whether existing model views exist, or whether the scene has been transformed.

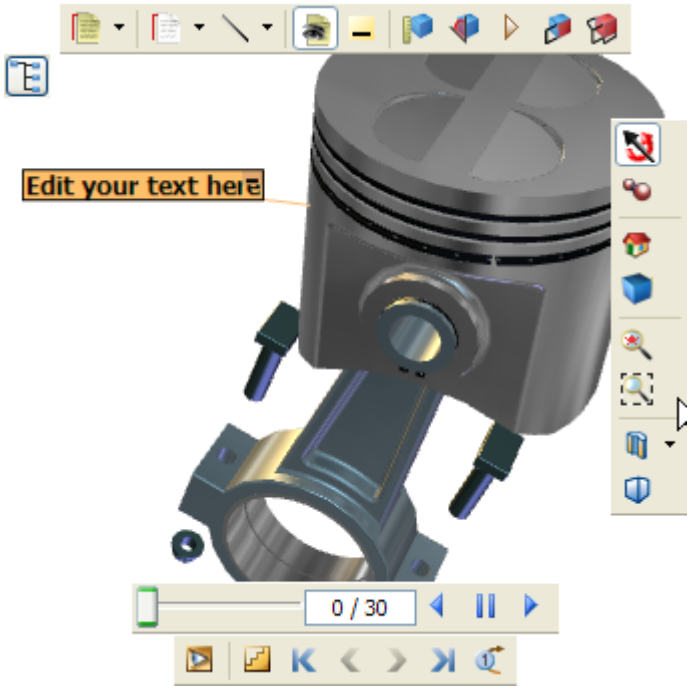
If there are no existing model views, a new model view is created that incorporates the new markup.

If the scene has not been transformed, the existing model view incorporates the new markup, you must update the model view to see the changes.

If the scene has been transformed, a new model view is created that incorporates the new markup.

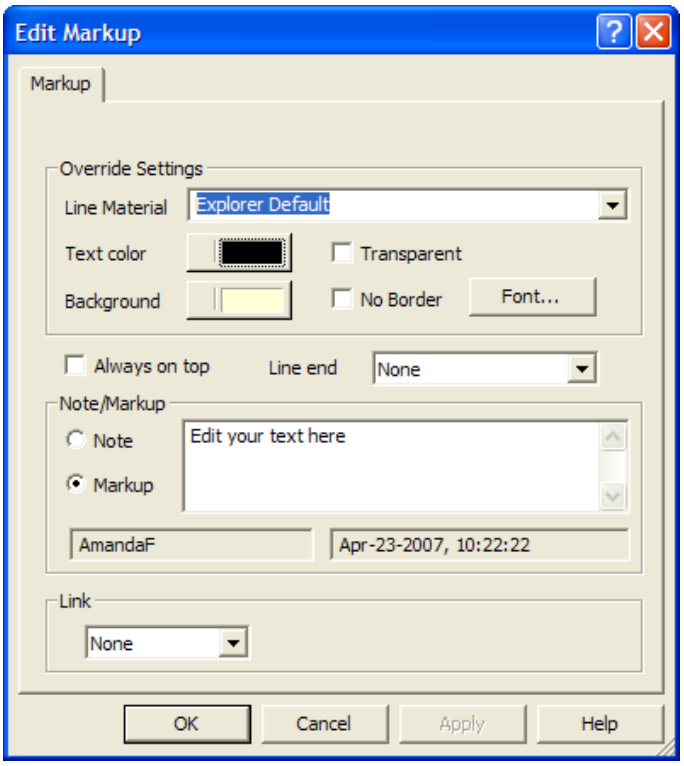
To create a new model view:

1 Click the 'Markup Line' icon,  on the 'Drawing and Markup' toolbar, and click the part of the model to which you want to add a markup. From this point a line will be drawn. Select a location within the model where you want the markup to appear. The default markup text box will be displayed.



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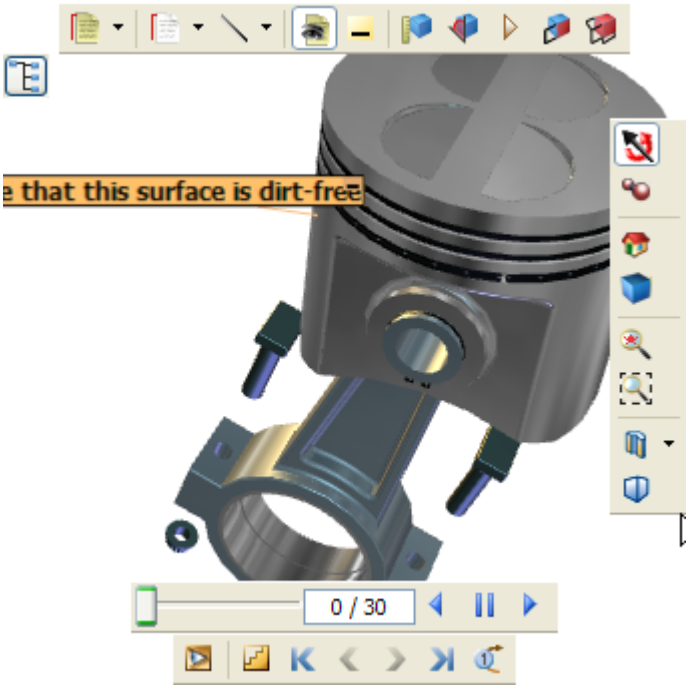
4 Double click the default markup text box, the ‘Edit Markup’ dialog box will appear. Leave the line material, text color and the background color as default. Click the ‘Font’ button and change the font to Arial, Bold, 8 point, and finally click the ‘Always on Top’ checkbox so that the leaderline always remains on top.



5 Enter the text that you want to appear in the markup.

Note: If you would like to remove the time/date stamp and the username from the markup, select ‘Note’ instead of ‘Markup’ in the Note/Markup section.

6 Click **OK**. The edited markup will appear in the model.



Congratulations, you have successfully added a markup and a new model view to your model.

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